



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,057	12/11/2003	Todd F. Bischoff	71745 CCD	2508

7590 06/03/2005

Christopher C. Dunham  
c/o Cooper & Dunham LLP  
1185 Ave of the Americas  
New York, NY 10036

EXAMINER
----------

DANIELS, MATTHEW J

ART UNIT	PAPER NUMBER
----------	--------------

1732

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/735,057

Applicant(s)

BISCHOFF ET AL.

Examiner

Matthew J. Daniels

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/24/04, 4/18/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-6, drawn to a method of molding a slurry, classified in class 264, subclass 256.
  - II. Claims 7-13, drawn to a method of impregnating a component, classified in class 264, subclass 644.
2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes and effects, namely invention I is a method of molding slurry, and invention II is a method of impregnating a formed part.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, recognized divergent subject matter, and because the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Dunham on 17 May 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1732

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Information Disclosure Statement***

6. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, or cited in the Applicant's information disclosure statements filed 18 April 2005 and 24 May 2004, they have not been considered.

#### ***International Search Report***

7. The documents cited on the International Search Report are noted. Rejections based on these items are deemed to be cumulative over those contained in this action.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1732

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 2, and 4-6** are rejected under 35 U.S.C. 103(a) as being obvious over

Yamamoto (USPN 4690867) in view of Shea (USPN 2698256) and Callis (USPN 2502418).

Yamamoto teaches a method of making an unfired refractory component (7:53-64) comprising:

a) forming a slurry comprising calcium silicate-containing refractory material (5:25-27)

b) placing the slurry in a mold (6:4-22)

d) hydrothermally processing the component to form a final product (6:23-36)

Yamamoto teaches calcium oxide in the form of lime, but appears to be silent to a slurry also comprising a barium- or strontium-containing compound and drying the slurry. However, Shea teaches a barium or strontium containing compound (3:10-16) and Callis teaches drying (4:24-34). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to incorporate the methods of Shea and Callis into that of Yamamoto in view of Shea's teachings that calcium oxides and hydroxides are interchangeable with barium or strontium oxides and hydroxides (3:3-26) and to produce insulating blocks having good resistance to rupture and a low thermal conductivity (Callis, 1:15-25). **As to Claim 2**, Shea teaches barium oxide and hydroxides (3:10-15). **As to Claims 4-6**, Callis teaches forming an aqueous solution of barium hydroxide (1:37-44 and 2:29-55) wherein the aqueous solution is prepared with water at a temperature of at least 30 C (2:29-35) and at least 40 C (2:29-35).

Art Unit: 1732

9. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Shea (USPN 2698256) in view of Lucas (GB 580,916). Yamamoto, Callis, and Shea teach the subject matter of Claims 1 and 2. See the rejection of Claims 1-2 under 35 USC 103(a). **As to Claim 3**, Shea teaches barium sulphate (6:45-49), but appears to teach only a slurry. However, Singer and Lucas teach barium sulphate, in either a dry or liquid state, mixed with silicates applied to protect refractory materials (Page 1, Lines 53-92). The coating provides the beneficial aspect of preventing contamination of molten aluminum (Page 1, Lines 10-22). It would have been prima facie obvious to incorporate the method of Lucas into the method of Yamamoto, Callis, and Shea because doing so would protect the entire refractory material and avoid contamination of the aluminum melt.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Examiner cites Sullivan (USPN 2160924) as indication of the state of the art at the time of the invention.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

Art Unit: 1732

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJD 5/18/05



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**